```
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DICTIONARY FILE UPDATES:   2 JUN 2004  HIGHEST RN 688737-01-1

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=> file hcaplus
FILE 'HCAPLUS' ENTERED AT 12:51:25 ON 03 JUN 2004
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FILE COVERS 1907 - 3 Jun 2004  VOL 140 ISS 23
FILE LAST UPDATED: 2 Jun 2004  (20040602/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.


=> d que
L20             1 SEA FILE=REGISTRY ABB=ON  "1,4,7,10,13,16-HEXAAZACYCLOOCTADECAN
                  E TRISULFATE"/CN
L25          4547 SEA FILE=REGISTRY ABB=ON  3068.33.8/RID
L34           108 SEA FILE=REGISTRY ABB=ON  C19H24N2.CLH/MF
L35            17 SEA FILE=REGISTRY ABB=ON  L25 AND L34
L38             1 SEA FILE=REGISTRY ABB=ON  L35 AND DIMETHYLAMINOPROP?
L53             7 SEA FILE=REGISTRY ABB=ON  C4H7N5O.H2O4S/MF
L57             2 SEA FILE=REGISTRY ABB=ON  C4H9N3.2CLH/MF
L58             1 SEA FILE=REGISTRY ABB=ON  L57 AND PYRIMI?
L59             1 SEA FILE=REGISTRY ABB=ON  C4H6N4S.H2O4S/MF
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KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

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L61           2 SEA FILE=REGISTRY ABB=ON  L60 AND 2(W)4
L62        1031 SEA FILE=HCAPLUS ABB=ON   L61 OR L59 OR L53 OR L58 OR L38 OR
                L20
L63           2 SEA FILE=HCAPLUS ABB=ON   L62 AND BATTER?
L64           5 SEA FILE=HCAPLUS ABB=ON   L62(L)ELECTROLYTE?
L65           7 SEA FILE=HCAPLUS ABB=ON   L63 OR L64
L77           1 SEA FILE=REGISTRY ABB=ON  "2,4-DIAMINO-6-MERCAPTOPYRIMIDINE
                HEMISULFATE"/CN
L79           1 SEA FILE=REGISTRY ABB=ON  "6-HYDROXY-2,4,5-TRIAMINOPYRIMIDINE
                SULFATE"/CN
L81           1 SEA FILE=REGISTRY ABB=ON  "2-IMINOPIPERIDINE HYDROCHLORIDE"/CN

L84           1 SEA FILE=REGISTRY ABB=ON  "IMIPRAMINE HYDROCHLORIDE"/CN
L87           1 SEA FILE=REGISTRY ABB=ON  "1,4,7,10,13,16-HEXAAZACYCLOOCTADECAN
                E TRISULFATE"/CN
L91           5 SEA FILE=REGISTRY ABB=ON  L77 OR L79 OR L81 OR L84 OR L87
L92        1122 SEA FILE=HCAPLUS ABB=ON   L91
L94           3 SEA FILE=HCAPLUS ABB=ON   L92 AND BATTER?
L95           6 SEA FILE=HCAPLUS ABB=ON   L92(L)ELECTROLYT?
L96           8 SEA FILE=HCAPLUS ABB=ON   L65 OR L94 OR L95
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Compounds I - VI searched with batter? or electrolyte

=> d l95 1-8 bib abs hitind hitstr

L95 ANSWER 1 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:731243 HCAPLUS
DN 135:291346
TI Secondary lithium batteries
IN Yang, Li; Yoshida, Toshihiro; Nemoto, Hiroshi; Takahashi, Michio
PA NGK Insulators, Ltd., Japan
SO PCT Int. Appl., 67 pp.
CODEN: PIXXD2
DT Patent
LA Japanese

applicant

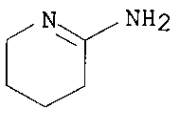
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001073884	A1	20011004	WO 2001-JP1135	20010216
	W: CA, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	JP 2001273927	A2	20011005	JP 2000-89934	20000328
	JP 2001283907	A2	20011012	JP 2000-89936	20000328
	JP 2001283919	A2	20011012	JP 2000-89965	20000328
	JP 2001283920	A2	20011012	JP 2000-89972	20000328
	JP 2001283921	A2	20011012	JP 2000-89974	20000328
	EP 1202374	A1	20020502	EP 2001-904518	20010216
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
	US 2003190530	A1	20031009	US 2001-9216	20011108
PRAI	JP 2000-89934	A	20000328		
	JP 2000-89936	A	20000328		
	JP 2000-89965	A	20000328		
	JP 2000-89972	A	20000328		
	JP 2000-89974	A	20000328		
	WO 2001-JP1135	W	20010216		

AB The batteries have a coiled electrode/separator stack and a nonaq. Li salt electrolyte solution, where the cathode, anode, separator, and/or the

electrolyte solution contain organic and/or inorg. Cu corrosion inhibitor or Cu trapping agent, a compound containing both basic organic groups and inorg. acid groups, a N-O radical containing cyclic compound, a compound not containing Lewis acid
atoms and Lewis base atoms at the same time, a 3-dimensional siloxane compound, and/or a nonionic surfactant, and/or a cyclic Mn2+ source in the electrolytes; and the electrolyte soln contains a water trapping agent or a HF trapping agent.

IC ICM H01M010-40
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
IT 95-14-7, 1,2,3-Benzotriazole 128-94-9, 1,8-Diamino-4,5-dihydroxyanthraquinone 2564-83-2 9004-99-3 9014-92-0, Polyethylene glycol mono-dodecylphenyl ether 14325-24-7, Manganese (II) phthalocyanine 14691-88-4 **16011-96-4**, 2-Iminopiperidine hydrochloride 26027-38-3, Polyethylene glycol mono-4-nonylphenyl ether 26635-92-7 34272-83-8 207505-82-6 213453-16-8 364589-08-2 364589-09-3
RL: MOA (Modifier or additive use); USES (Uses)
(additives for electrodes and separators and **electrolyte** solns. in secondary lithium batteries)
IT **16011-96-4**, 2-Iminopiperidine hydrochloride
RL: MOA (Modifier or additive use); USES (Uses)
(additives for electrodes and separators and **electrolyte** solns. in secondary lithium batteries)
RN 16011-96-4 HCAPLUS
CN 2-Pyridinamine, 3,4,5,6-tetrahydro-, monohydrochloride (9CI) (CA INDEX NAME)



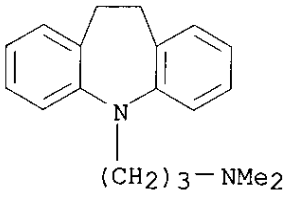
● HCl

RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L95 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1987:55762 HCAPLUS
DN 106:55762
TI Total intensity and quasielastic light scattering studies on the association of amphiphilic drugs in aqueous electrolyte solutions
AU Attwood, D.; Fletcher, P.
CS Dep. Pharm., Univ. Manchester, Manchester, M13 9PL, UK
SO Journal of Colloid and Interface Science (1987), 115(1), 104-9
CODEN: JCISA5; ISSN: 0021-9797
DT Journal
LA English
AB Total intensity and quasielastic light scattering (QELS) techniques were used to examine the effect of **electrolyte** on the micellar properties of the antidepressant drug imipramine-HCl [**113-52-0**] in aqueous solution A progressive increase of aggregation number and micellar radius was observed with increase of NaCl concentration over the range 0.05 to 0.6M.

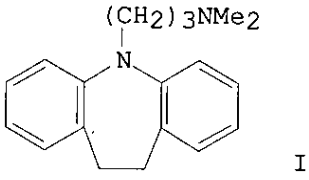
A marked decrease of the diffusion coefficient with increase of drug concentration at
concns. just in excess of the critical micelle concentration was noted and discussed. QELS measurements of trimetaphan camphorsulfonate [68-91-7], which exhibits continuous association, showed a complex variation of effective diffusion coefficient with drug and **electrolyte** concentration

CC 63-5 (Pharmaceuticals)
IT 68-91-7 **113-52-0**, Imipramine hydrochloride
RL: PRP (Properties)
(association of, in **electrolyte** solns., total intensity and quasielastic light scattering in study of)
IT **113-52-0**, Imipramine hydrochloride
RL: PRP (Properties)
(association of, in **electrolyte** solns., total intensity and quasielastic light scattering in study of)
RN 113-52-0 HCAPLUS
CN 5H-Dibenz[b,f]azepine-5-propanamine, 10,11-dihydro-N,N-dimethyl-, monohydrochloride (9CI) (CA INDEX NAME)



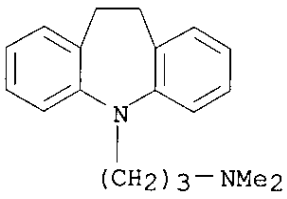
● HCl

L95 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1986:135972 HCAPLUS
DN 104:135972
TI Adsorption of antidepressants on clays. Part II. Effect of solvents and electrolytes on the adsorption of imipramine hydrochloride on veegum and bentonite
AU El-Mowafi, Mohamed A.; Geneidi, Ahmed S.; Kassem, Aly A.
CS Nile Co. Pharm., Cairo, Egypt
SO Egyptian Journal of Pharmaceutical Sciences (1985), Volume Date 1983, 24(1-4), 287-96
CODEN: EJPSBZ; ISSN: 0301-5068
DT Journal
LA English
GI



I

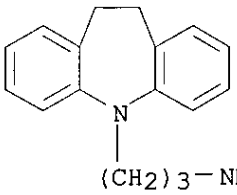
AB Increasing concns. of polyethylene glycol 400 [25322-68-3], EtOH [64-17-5] and glycerol [56-81-5] decreased the adsorption of imipramine-HCl (I-HCl) [113-52-0] on Veegum S-6198 [1327-43-1] and bentonite, while sorbitol [50-70-4] showed no such effect. With increasing concns. of Na2HPO4, NaCl and Na citrate [68-04-2] the amount of I adsorbed increased. Reasons for the difference in behavior are discussed.
CC 63-5 (Pharmaceuticals)
IT **113-52-0**
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(adsorption of, on Veegum and bentonite, solvents and **electrolytes** effect on)
IT **113-52-0**
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(adsorption of, on Veegum and bentonite, solvents and **electrolytes** effect on)
RN 113-52-0 HCAPLUS
CN 5H-Dibenz[b,f]azepine-5-propanamine, 10,11-dihydro-N,N-dimethyl-, monohydrochloride (9CI) (CA INDEX NAME)



● HCl

L95 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1985:427182 HCAPLUS
DN 103:27182
TI Studies on the adsorption of cationic amphiphilic drugs on antacids and adsorbents. 5. Studies on the desorption behavior of cationic, amphiphilic drugs
AU Thoma, K.; Lieb, H.
CS Inst. Pharm. Lebensmittelchem., Ludwig-Maximilians-Univ. Muenchen, Munich, D-8000/2, Fed. Rep. Ger.
SO Pharmaceutica Acta Helvetiae (1985), 60(4), 98-105
CODEN: PAHEAA; ISSN: 0031-6865
DT Journal
LA German
AB The desorption of cationic, amphiphilic drugs such as diphenhydramine-HCl (I) [147-24-0], chlorpromazine-HCl (II) [69-09-0], and imipramine-HCl [**113-52-0**] from antacids such as Mg trisilicate, basic Bi nitrate and adsorbents such as kaolin was investigated. The desorption was affected very strongly by solvent media, drug and the adsorbent concns. Increasing the elution time increased the desorbed amts. of I from 59.1% to 63.1%. Increasing the **electrolyte** content and decreasing the pH of the medium increased the desorbed amts. With II, desorption increased as the adsorbent was changed from Mg trisilicate to basic Bi nitrate (maximum).
CC 63-5 (Pharmaceuticals)

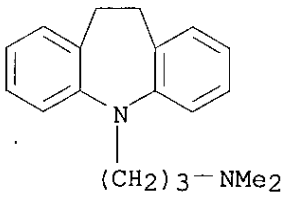
L95 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1981:20301 HCAPLUS
DN 94:20301
TI Colloid association of tri- and tetracyclic antidepressives and neuroleptics. 4. Communication. Determination of miceller weights and influence of the medium conditions on the association properties
AU Thoma, K.; Albert, K.
CS Inst. Galenische Pharm., Johann-Wolfgang-Goethe-Univ., Frankfurt, D-6000, Fed. Rep. Ger.
SO Pharmaceutica Acta Helvetiae (1980), 55(5), 146-55
CODEN: PAHEAA; ISSN: 0031-6865
DT Journal
LA German
AB The micellar wts. and aggregation nos. of 13 tricyclic antidepressants and neuroleptics in electrolyte-containing solns. were determined In acetate buffer pH
5.0, aggregates with micellar wts. between 3900-17,600 were formed. In a physiologic saline solution micellar wts. range from 5400 to 13,100. In 0.9% NaCl solution the piperazine derivs. clopenthixol-2HCl [633-59-0], flupentixol-2HCl [2413-38-9], and thiothixene-2HCl [49746-04-5] have on an average 8 monomers smaller micelles, and aminopropyl derivs. have 3 to 14 monomers larger micelles than in acetate buffer. The decrease and the increase of the size of the aggregates, can be explained in terms of changes in pH and counterions. The effect of different electrolytes on micelle formation of clomipramine-HCl [17321-77-6] and clopenthixol-2 HCl was investigated. In comparison to NaCl the same molar concns. of Na methanesulfonate [2386-57-4], NaOAc [127-09-3] and Na lactate [72-17-3] increase the critical micelle concns. (cmc), whereas Na succinate [150-90-3], Na tartrate [868-18-8], Na maleate [371-47-1], Na benzenesulfonate [515-42-4] and Na citrate [68-04-2] decrease the cmc's. The addition of electrolytes leads to a depression of the cmc's of clomipramine-HCl and clopenthixol-2 HCl. By increasing the concentration of chloride ions from 0.03 to 0.3 mol.l-1, the hydration of the clomipramine-HCl monomers was decreased and the cmc decreases to one third of its original value. With a simultaneous change of the dissociation degree of a compound, the pH can significantly influence the cmc. For the diacidic piperazine derivative clopenthixol-2 HCl the following was shown: increasing the pH from 2 to 6.5 decreased the dissociation degree of the weak basic N and because of the reinforced hydrophobic character of the compound the cmc also decreases to 4.4 10-4 mol.l-1.
CC 63-5 (Pharmaceuticals)
IT 58-28-6 **113-52-0** 549-18-8 633-59-0 739-71-9 894-71-3
1225-55-4 1229-29-4 2413-38-9 6469-93-8 10563-70-9 17321-77-6
49746-04-5
RL: BIOL (Biological study)
(aggregation and micellar wts. of, **electrolytes** and pH effect on)
IT **113-52-0**
RL: BIOL (Biological study)
(aggregation and micellar wts. of, **electrolytes** and pH effect on)
RN 113-52-0 HCAPLUS
CN 5H-Dibenz[b,f]azepine-5-propanamine, 10,11-dihydro-N,N-dimethyl-, monohydrochloride (9CI) (CA INDEX NAME)



● HCl

L95 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1970:402473 HCAPLUS
DN 73:2473
TI Cerebrospinal fluid electrolyte changes during lateral ventricular perfusion with noradrenaline and associated cardiovascular responses
AU Melville, Kenneth I.; Johnson, Melvin C.
CS Dep. Pharmacol. Ther., McGill Univ., Montreal, QC, Can.
SO Neuropharmacology (1970), 9(2), 79-95
CODEN: NEPHBW; ISSN: 0028-3908
DT Journal
LA English
AB Changes of the concentration of Na+, K+, Ca2+, and Mg2+ in cerebrospinal fluid, blood pressure, and heart rate elicited by a 60-min perfusion of the lateral ventricle were studied in chloralose-anesthetized, vagotomized cats. Perfusion with artificial cerebrospinal fluid changed neither the electrolytes of the cerebrospinal fluid nor the blood pressure of heart rate. Perfusions with artificial cerebrospinal fluid containing l-noradrenaline bitartrate (0.08-8 μg/ml) decreased Na+ concns. in the cerebrospinal fluid and elicited hypotension wihout changing the heart rate. Perfusions with high doses of noradrenaline (80-160 μg/ml) increased K concns. in the cerebrospinal fluid and elicited hypertension and tachycardia. With prolonged perfusions, tolerance or tachyphylaxis developed to these responses to noradrenaline. Intraventricular pretreatment with reserpine (1 mg), tranylcypromine sulfate (5 mg), chlorpromazine-hCl (10 mg), or imipramine-HCi (2 mg) increased K+ and Mg2+ concns. in the cerebrospinal fluid. Ca2+ concns. were also increased by chlorpromazine and imipramine, but Na+ concns. were not affected. After reserpine or tranylcypromine pretreatment, the increase of K+ concentration, the hypertension, and the tachycardia induced by noradrenaline were antagonized. After chlorpromazine or imipramine pretreatment, noradrenaline still induced hypertension and tachycardia, associated with no further change in K+ but with a decrased in Mg2+ concns. Centrally mediated cardiovascular responses induced by intraventricular noradrenaline seem to involve changes in cerebrospinal fluid and possibly in brain Na+ and (or) K+, and reserpine, tranylcypromine, chlorpromazine, and imipramine appear to induce significant shifts in brain Mg2+ and ca2+ concns. which might explain some actions of these drugs on the central nervous system.
CC 15 (Pharmacodynamics)
IT 50-55-5, biological studies 51-40-1 69-09-0 **113-52-0** 13492-01-8
RL: BIOL (Biological study)
(**electrolytes** of cerebrospinal fluid after administration of)

IT **113-52-0**
RL: BIOL (Biological study)
(**electrolytes** of cerebrospinal fluid after administration of)
RN 113-52-0 HCAPLUS
CN 5H-Dibenz[b,f]azepine-5-propanamine, 10,11-dihydro-N,N-dimethyl-, monohydrochloride (9CI) (CA INDEX NAME)



● HCl

=> => d que

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L34	108	SEA FILE=REGISTRY ABB=ON C19H24N2.CLH/MF
L35	17	SEA FILE=REGISTRY ABB=ON L25 AND L34
L38	1	SEA FILE=REGISTRY ABB=ON L35 AND DIMETHYLAMINOPROP?
L53	7	SEA FILE=REGISTRY ABB=ON C4H7N5O.H2O4S/MF
L57	2	SEA FILE=REGISTRY ABB=ON C4H9N3.2CLH/MF
L58	1	SEA FILE=REGISTRY ABB=ON L57 AND PYRIMI?
L59	1	SEA FILE=REGISTRY ABB=ON C4H6N4S.H2O4S/MF
L60	5	SEA FILE=REGISTRY ABB=ON C4H6N4O2.1/2H2O4S/MF
L61	2	SEA FILE=REGISTRY ABB=ON L60 AND 2(W)4
L62	1031	SEA FILE=HCAPLUS ABB=ON L61 OR L59 OR L53 OR L58 OR L38 OR L20
L63	2	SEA FILE=HCAPLUS ABB=ON L62 AND BATTER?
L64	5	SEA FILE=HCAPLUS ABB=ON L62(L)ELECTROLYTE?
L65	7	SEA FILE=HCAPLUS ABB=ON L63 OR L64
L66	32608	SEA FILE=HCAPLUS ABB=ON (LI OR LITHIUM)(5A)BATTER?
L67	4	SEA FILE=HCAPLUS ABB=ON L66 AND ORG? AND INORG?(1W)ACID
L68	6	SEA FILE=HCAPLUS ABB=ON L66 AND ORG?(6A)INORG?(1W)ACID
L70	0	SEA FILE=HCAPLUS ABB=ON L66 AND ORG?(2A)BASE? AND INORG?(2A)ACID?
L71	1	SEA FILE=HCAPLUS ABB=ON L66 AND ORG?(2A)BASIC? AND INORG?(2A)ACID?
L72	8	SEA FILE=HCAPLUS ABB=ON L67 OR L68 OR L70 OR L71
L77	1	SEA FILE=REGISTRY ABB=ON "2,4-DIAMINO-6-MERCAPTOPYRIMIDINE HEMISULFATE"/CN
L79	1	SEA FILE=REGISTRY ABB=ON "6-HYDROXY-2,4,5-TRIAMINOPYRIMIDINE SULFATE"/CN
L81	1	SEA FILE=REGISTRY ABB=ON "2-IMINOPIPERIDINE HYDROCHLORIDE"/CN
L84	1	SEA FILE=REGISTRY ABB=ON "IMIPRAMINE HYDROCHLORIDE"/CN
L87	1	SEA FILE=REGISTRY ABB=ON "1,4,7,10,13,16-HEXAAZACYCLOOCTADECANE TRISULFATE"/CN
L91	5	SEA FILE=REGISTRY ABB=ON L77 OR L79 OR L81 OR L84 OR L87

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L92        1122 SEA FILE=HCAPLUS ABB=ON  L91
L94           3 SEA FILE=HCAPLUS ABB=ON  L92 AND BATTER?
L95           6 SEA FILE=HCAPLUS ABB=ON  L92(L)ELECTROLYT?
L96           8 SEA FILE=HCAPLUS ABB=ON  L65 OR L94 OR L95
L97           7 SEA FILE=HCAPLUS ABB=ON  (L72 OR L96) NOT L96
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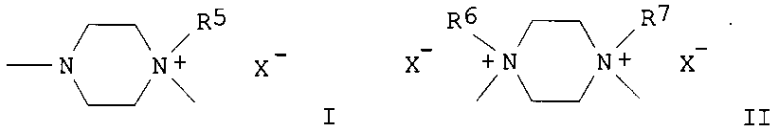
Tept search for 1b

=> d l97 1-7 all

L97 ANSWER 1 OF 7 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:886243 HCAPLUS
DN 137:387083
ED Entered STN: 22 Nov 2002
TI Nonaqueous gel composition containing crosslinked polymer having alkylammonium or piperazinium structure and electrochemical cell
IN Aizawa, Wakana; Ikegami, Koshiro; Takada, Masakazu; Takaoka, Kazuchiyo
PA Mitsubishi Paper Mills, Ltd., Japan; Nippon Unicar Co., Ltd.
SO Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C08L101-02
ICS H01B001-06; H01G009-025; H01M010-40
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38, 76
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002332417	A2	20021122	JP 2001-138273	20010509
PRAI	JP 2001-138273		20010509		

GI



I II

AB The title gel composition comprises a polymer having a crosslinked structure R1NX, R2NYNX2, R4NYNX, I, or II [R1-R7 = (substituted) C1-9 alkyl; X = monovalent **inorg.** or **organic acid** or its equivalent; Y = C1-8 alkylene, alkylene oxide, or xylylene]. The composition, especially suitable for secondary **Li batteries** and capacitors, has high resistance to free acids generated in an electrolyte solution

ST alkylammonium crosslinked polymer electrolyte capacitor; piperazinium crosslinked polymer nonaq electrolyte battery

IT Capacitors
(double layer; nonaq. gel electrolyte composition containing crosslinked polymer having alkylammonium or piperazinium structure for battery and capacitor)

IT Secondary **batteries**
(**lithium**; nonaq. gel electrolyte composition containing crosslinked polymer having alkylammonium or piperazinium structure for battery and capacitor)

IT Battery electrolytes
Crosslinking agents
Electrolytic capacitors
Polymer electrolytes
(nonaq. gel electrolyte composition containing crosslinked polymer having alkylammonium or piperazinium structure for battery and capacitor)
IT Quaternary ammonium compounds, uses
RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
(polymers; nonaq. gel electrolyte composition containing crosslinked polymer having alkylammonium or piperazinium structure for battery and capacitor)
IT 96-49-1, Ethylene carbonate 105-58-8, Diethyl carbonate 108-32-7, Propylene carbonate 429-06-1, Tetraethylammonium tetrafluoroborate 21324-40-3, Lithium hexafluorophosphate
RL: DEV (Device component use); USES (Uses)
(composition containing; nonaq. gel electrolyte composition containing crosslinked
polymer having alkylammonium or piperazinium structure for battery and capacitor)
IT 1072-63-5DP, N-Vinylimidazole, polymers with alkylammonium compound and piperazinium compound 1337-81-1DP, Vinylpyridine, polymers with vinyl monomer and piperazinium compound 52352-11-1DP, Vinylbenzylamine, alkylammonium fluorophosphates, polymers with piperazinium compound 476013-44-2P 476013-47-5P 476013-48-6DP, polymers with vinyl monomer and piperazinium compound 476013-50-0DP, polymers with vinyl monomer
RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
(nonaq. gel electrolyte composition containing crosslinked polymer having alkylammonium or piperazinium structure for battery and capacitor)

L97 ANSWER 2 OF 7 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:80804 HCAPLUS
DN 136:388363
ED Entered STN: 31 Jan 2002
TI New technique for preparation of the cathode material of **lithium** -ion **battery**
AU Wei, Jin-Ping; Deng, Bin; Yan, Jie; Zhou, Zhen; Song, De-Ying
CS Institute of New Energy Material Chemistry, Nankai University, Tianjin, 300071, Peop. Rep. China
SO Gaodeng Xuexiao Huaxue Xuebao (2001), 22(10, Suppl.), 9-12
CODEN: KTHPDM; ISSN: 0251-0790
PB Gaodeng Jiaoyu Chubanshe
DT Journal
LA Chinese
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
AB The cathode material LiCoO2 of **lithium**-ion **batteries** can be obtained from the reaction of LiOH-H2O and Co(OH)2-2xRx(R is the **inorg**. or **organic acid** radicals), which is the midst product of the electrolysis of the metal cobalt in a given electrolyte. The achieved cathode material LiCoO2 for **lithium** -ion **batteries** has a single phase and its granularity distribution relatively concs. through the expts. of XRD, SEM and Laser Granularity Testing. The discharge capacity is relatively high which reaches 146 mAh/g at the first time of discharging and still maintains 142 mAh/g after 10 cycles of charge/discharge expts. The cost for the preparation of the cathode material LiCoO2 can greatly be decreased through this technique, which has a well-promising application future.
ST **battery** cathode cobalt **lithium** oxide

IT Battery cathodes
(new technique for preparation of the cathode material of **lithium** -ion **battery**)
IT 12190-79-3P, Cobalt lithium oxide LiCoO2
RL: PEP (Physical, engineering or chemical process); PNU (Preparation, unclassified); PREP (Preparation); PROC (Process)
(new technique for preparation of the cathode material of **lithium** -ion **battery**)

L97 ANSWER 3 OF 7 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:865039 HCAPLUS
DN 136:9048
ED Entered STN: 30 Nov 2001
TI Manufacture of cathode active mass and nonaqueous electrolyte battery using the active mass
IN Takagi, Shigeharu
PA Toyota Motor Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM H01M004-58
ICS H01M010-40
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2001332261	A2	20011130	JP 2000-150317	20000522
PRAI JP 2000-150317		20000522		

AB The cathode active mass is prepared by soaking a Li containing multiple oxide, having a rock salt structure, in water, polar **organic** solvent, and/or **inorg. acid** for ≥12 h. The **battery** is a secondary **Li battery**.
ST secondary **lithium battery** cathode active mass manuf; **lithium** multiple oxide manuf secondary **battery** cathode
IT Acids, uses
RL: NUU (Other use, unclassified); USES (Uses)
(inorg., polar; solution soaking of lithium containing multiple oxides in manufacture of cathode active mass for secondary **lithium batteries**)
IT Solvents
(**organic**, polar; solution soaking of lithium containing multiple oxides in manufacture of cathode active mass for secondary **lithium batteries**)
IT **Battery** cathodes
(solution soaking of **lithium** containing multiple oxides in manufacture of cathode active mass for secondary **lithium batteries**)
IT 193214-24-3P, Aluminum cobalt lithium nickel oxide (Al0.05Co0.15LiNi0.8O2)
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(manufacture of cathode active mass by solution soaking of lithium containing multiple oxides for secondary **lithium batteries**)
IT 7732-18-5, Water, uses
RL: NUU (Other use, unclassified); USES (Uses)
(solution soaking of lithium containing multiple oxides in manufacture of cathode active mass for secondary **lithium batteries**)

L97 ANSWER 4 OF 7 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:212891 HCAPLUS
DN 130:225376
ED Entered STN: 05 Apr 1999
TI Battery cathodes and their manufacture
IN Morita, Kimihiro; Shimizu, Hiroyuki
PA Asahi Chemical Industry Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM H01M004-02
ICS H01M004-04; H01M004-58; H01M004-62; H01M004-66; H01M010-40
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 11086846	A2	19990330	JP 1997-334099	19971204
PRAI JP 1997-180877		19970707		

AB The cathodes have a slurry containing Li Ni oxide, a conductive additive, a fluoropolymer, a diluting agent, and a slurry stabilizer applied on an Al collector. The stabilizer is an **inorg.** or **organic acid**, Fe bromide, or FeCl3; the Li Ni oxide may contain other transition metals and elements selected from B, Al, In, Sn, Mg, and Zn. The cathodes are prepared by dissolving the stabilizer and the fluoropolymer in the diluting agent, dispersing Li Ni oxide and the conductive additive to the solution, applying the slurry to Al collectors, and drying.
ST **battery lithium** nickel oxide cathode manuf
IT **Battery** cathodes
(compns. and manufacture of **lithium** nickel oxide based cathodes from slurries on aluminum substrates for batteries)
IT Fluoropolymers, uses
RL: MOA (Modifier or additive use); USES (Uses)
(compns. and manufacture of lithium nickel oxide based cathodes from slurries on aluminum substrates for batteries)
IT 221154-74-1, Cobalt lithium magnesium nickel oxide (Co0.1LiMg0.01Ni0.89O2)
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(compns. and manufacture of lithium nickel oxide based cathodes from slurries on aluminum substrates for batteries)
IT 24937-79-9, Poly(vinylidene fluoride)
RL: MOA (Modifier or additive use); USES (Uses)
(compns. and manufacture of lithium nickel oxide based cathodes from slurries on aluminum substrates for batteries)
IT 872-50-4, N-Methyl-2-pyrrolidone, uses 7705-08-0, Ferric chloride, uses 128151-86-0, Dynomil
RL: NUU (Other use, unclassified); USES (Uses)
(compns. and manufacture of lithium nickel oxide based cathodes from slurries on aluminum substrates for batteries)

L97 ANSWER 5 OF 7 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1997:491191 HCAPLUS
DN 127:151031
ED Entered STN: 04 Aug 1997
TI Nonaqueous secondary batteries with anodes containing amorphous chalcogen compounds or oxides
IN Maekawa, Yukio; Miyaki, Yukio
PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM H01M004-58
ICS H01M004-02; H01M004-04; H01M010-40
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09190819	A2	19970722	JP 1996-142	19960105
PRAI	JP 1996-142		19960105		

AB The title **batteries** use **Li**-intercalating anodes containing amorphous chalcogen compds. or amorphous oxides treated with organic acids or their salts. The batteries have long cycle life and high capacity.
ST anode amorphous chalcogen compd battery; amorphous oxide anode **lithium battery**; carboxylic acid treatment anode battery
IT Carboxylic acids, uses
RL: NUU (Other use, unclassified); USES (Uses)
(amorphous chalcogen compds. or oxides treatment by; anodes for nonaq. batteries with capacity and long cycle life)
IT Chalcogenides
Oxides (**inorganic**), uses
RL: DEV (Device component use); USES (Uses)
(amorphous, **organic acid**-treated, anodes; nonaq. batteries with capacity and long cycle life)
IT Battery anodes
(anodes containing organic acid-treated amorphous chalcogen compds. or oxides
for nonaq. batteries)
IT Secondary **batteries**
(**lithium**; anodes containing organic acid-treated amorphous chalcogen compds. or oxides for nonaq. batteries)
IT 57-11-4, Octadecanoic acid, uses 64-19-7, Acetic acid, uses 65-85-0, Benzoic acid, uses 75-75-2, Methanesulfonic acid 79-09-4, Propionic acid, uses 88-99-3, 1,2-Benzenedicarboxylic acid, uses 103-82-2, Phenylacetic acid, uses 110-15-6, Butanedioic acid, uses 110-16-7, 2-Butenedioic acid (Z)-, uses 110-94-1, Glutaric acid 123-76-2, Levulinic acid 124-04-9, Adipic acid, uses 127-17-3, Pyruvic acid, uses 141-82-2, Malonic acid, uses 144-62-7, Ethanedioic acid, uses 298-12-4, Glyoxylic acid 528-44-9, Trimellitic acid 541-50-4, Acetoacetic acid, uses 553-91-3, Dilithium oxalate 2051-95-8, 3-Benzoylpropionic acid 9003-01-4, Polyacrylic acid 25087-26-7, Polymethacrylic acid
RL: NUU (Other use, unclassified); USES (Uses)
(amorphous chalcogen compds. or oxides treatment by; anodes for nonaq. batteries with capacity and long cycle life)
IT 188198-63-2 193217-90-2 193217-92-4 193217-94-6 193217-95-7 193266-49-8
RL: DEV (Device component use); USES (Uses)
(amorphous, organic acid-treated, anode; nonaq. batteries with capacity and long cycle life)
IT 193266-48-7P
RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
(amorphous, organic acid-treated, anode; nonaq. batteries with capacity and long cycle life)

L97 ANSWER 6 OF 7 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1980:498508 HCAPLUS
DN 93:98508
ED Entered STN: 12 May 1984
TI Manganese dioxide, and electrochemical cell having cathode containing said manganese dioxide
IN Hunter, James Charles
PA Union Carbide Corp., USA
SO Eur. Pat. Appl., 20 pp.
CODEN: EPXXDW
DT Patent
LA English
IC C01G045-02; H01M004-50
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 49
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 9934	A1	19800416	EP 1979-302024	19790928
	EP 9934	B1	19821103		
	R: DE, FR, GB				
	US 4246253	A	19810120	US 1978-947120	19780929
	CA 1134595	A1	19821102	CA 1979-335495	19790912
	AU 7951218	A1	19800403	AU 1979-51218	19790926
	NO 7903102	A	19800401	NO 1979-3102	19790927
	BR 7906195	A	19800909	BR 1979-6195	19790927
	ES 484508	A1	19801101	ES 1979-484508	19790927
	DK 7904086	A	19800330	DK 1979-4086	19790928
	JP 55100224	A2	19800731	JP 1979-125241	19790928
	JP 58034414	B4	19830726		
	ES 491736	A1	19810901	ES 1980-491736	19800522
	US 4312930	A	19820126	US 1980-180616	19800825
PRAI	US 1978-947120		19780929		

AB MnO2 useful in the manufacture of battery cathodes is prepared by acid treatment of LiMn2O4. Thus, the preparation of λ-MnO2 by treating LiMn2O4 with 3N HCl, 4.7N H2SO4, or 4N HNO3 is reported. LiMn2O4 was prepared by heating a powdered mixture of Li2CO3 and Mn2O3 in air at 850° for 1 h. The use of λ-MnO2 in an **organic**-electrolyte **Li battery** was demonstrated.
ST manganese dioxide manuf battery; **lithium battery** manganese dioxide
IT **Batteries**, primary
(**lithium**, **organic**-electrolyte)
IT Electrolytic depolarizers
(battery, manganese dioxide, manufacture of)
IT 1313-13-9P, preparation
RL: PREP (Preparation)
(manufacture of λ-, from lithium manganese oxide, by treatment with **inorg. acid**)

L97 ANSWER 7 OF 7 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1967:121440 HCAPLUS
DN 66:121440
ED Entered STN: 12 May 1984
TI High energy electrochemical battery systems using **organic** electrolytes
AU Knapp, Howard R.
CS Army Electrons. Command, Fort Monmouth, NJ, USA
SO U. S. C. F. S. T. I., AD Rep. (1965), AD 627215, 55 pp. Avail.: CFSTI, $3

cy
From: U.S. Govt. Res. Develop. Rept. 1966, 41(5), 40
CODEN: XCCIAV
DT Report
LA English
CC 77 (Electrochemistry)
AB cf. CA 64, 3011d. Electrochemical studies on high energy anode and cathode materials coupled in **organic** electrolytes were undertaken to determine the feasibility of producing batteries superior to aqueous systems in the areas of (1) higher energy d. per unit weight and volume, (2) wider temperature range of operation than aqueous batteries, and (3) lower operating temperature than aqueous batteries. The report covers the selection of couples for study in **organic** electrolytes. Statistical evaluation of half-cell potential data at room temperature has disclosed **inorg. acid** anhydrides to be promising cathode materials in several **organic** electrolytes. Preliminary cell studies using Li anodes, dimethyl sulfoxide electrolytes, and acid anhydride cathode materials, such as CrO3, I2O5, molybdic oxide, and V2O5 were to characterize electrochem. performance of these materials.
ST **ORG** ELECTROLYTE BATTERIES; **LITHIUM** ANODES **BATTERIES**; BATTERIES **ORG** ELECTROLYTE
IT **Organic** compounds, uses and miscellaneous
RL: USES (Uses)
(electrolytes, in high-energy primary batteries)
IT Batteries, primary
(high-energy, with **organic** electrolytes)

=> => file wpix
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FILE LAST UPDATED: 3 JUN 2004 <20040603/UP>
MOST RECENT DERWENT UPDATE: 200435 <200435/DW>
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>>> THE DISPLAY LAYOUT HAS BEEN CHANGED TO ACCOMODATE THE NEW FORMAT GERMAN PATENT APPLICATION AND PUBLICATION NUMBERS. SEE ALSO: http://www.stn-international.de/archive/stnews/news0104.pdf <<<

>>> SINCE THE FILE HAD NOT BEEN UPDATED BETWEEN APRIL 12-16 THERE WAS NO WEEKLY SDI RUN <<<

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=> d que
L66       32608 SEA FILE=HCAPLUS ABB=ON  (LI OR LITHIUM)(5A)BATTER?
L67           4 SEA FILE=HCAPLUS ABB=ON  L66 AND ORG? AND INORG?(1W)ACID
L68           6 SEA FILE=HCAPLUS ABB=ON  L66 AND ORG?(6A)INORG?(1W)ACID
L70           0 SEA FILE=HCAPLUS ABB=ON  L66 AND ORG?(2A)BASE? AND INORG?(2A)AC
                ID?
L71           1 SEA FILE=HCAPLUS ABB=ON  L66 AND ORG?(2A)BASIC? AND INORG?(2A)A
                CID?
L98          11 SEA FILE=WPIX ABB=ON  L67 OR L68 OR L70 OR L71


=> d l98 all 1-11

L98  ANSWER 1 OF 11  WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN   2004-106569 [11]   WPIX
DNN  N2004-084685       DNC C2004-043285
TI   New carbon material carbonized/prepared from poly(phenylene ether) is used
     in adsorption applications, e.g. anti-pollution devices.
DC   A18 A21 A25 A35 A85 D15 E36 J01 J06 L03 V01 X16
IN   CABASSO, I; LI, S; LIU, H; YUAN, Y
PA   (CABA-I) CABASSO I; (LISS-I) LI S; (LIUH-I) LIU H; (YUAN-I) YUAN Y
CYC  1
PI   US 2003161781   A1 20030828 (200411)*      23    C01B031-02
ADT  US 2003161781 A1 US 2001-968290 20011001
PRAI US 2001-968290       20011001
IC   ICM  C01B031-02
AB   US2003161781 A UPAB: 20040213
     NOVELTY - A carbon material carbonized/prepared from a poly(phenylene
     ether) and comprising 60-99.99 weight% carbon is new.
          DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:
          (a) a composite comprising carbon and a modified poly(phenylene
     ether) (MPPE) carbon material, in which carbon material binds carbon
     particles and/or carbon fibers while maintaining the shape of the
     composite; and
          (b) preparing an activated carbon from poly(phenylene ether) (PPE)
     precursor polymer of formula (I), by oxidizing the poly(phenylene ether)
     precursor, and carbonizing the modified poly(phenylene ether);
          (c) preparing carbon/carbon composite from MPPE by forming a carbon
     fiber fabric with an organic fibrous binder consisting of cellulose,
     cellulose ethers or its derivatives, polyacrylonitrile, oxidized
     polyacrylonitrile, phenolic resins, polyvinyl acetate and/or epoxides;
     forming a solution of PPE or a slurry by mixing the PPE solution with
     other carbonous materials; applying the PPE solution to the carbon fiber
     fabric to form a composite; drying the composite; pressing the dried
     composite at 1-10000 psig; oxidizing the pressed composite in an oxygen
     containing atmosphere at 100-420 deg. C to crosslinked the PPE polymer to
     form MPPE; carbonizing the MPPE at 500-3000 deg. C in non-oxidizing
     atmosphere to form a carbon material; and activating the MPPE electrode
     with oxidizing gases, bases, or acids at elevated temperatures; and
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(d) forming porous electrodes for double layer capacitors by forming a slurry by mixing PPE solution with other carbonous materials; transferring the slurry into a body having holes or dents on it; drying the slurry to form a solid body; pressing the solid body at 10-5000 psig; oxidizing the body in an oxygen containing atmosphere; carbonizing the MPPE composite to form an MPPE electrode; activating the MPPE electrode; and assembling a double layer capacitor with MPPE electrode by sandwiching them with a separator in an electrolyte, and stacking with current collectors.

R1, R2 = H, 1-6C aliphatic group, 6-24C aromatic group, aliphatic ether, aromatic ether, aliphatic or aromatic ester, carbonyl ester, carboxylic acid, ketone, lactone, or xanthone;
n = 10-10000.

Intermolecular and intramolecular linkages exist between the R1 and R2 groups in the MPPE.

USE - Used in adsorption applications, e.g. anti-pollution devices, fuel gas storage, or electrochemical applications including electrodes or current collectors for double layer capacitors and **lithium**-ion **batteries**, or gas diffusion electrodes for fuel cells.

ADVANTAGE - The carbon material having high electric conductivity, high surface area controllable pore size distribution, long lifetime, low strength deterioration, and is easy to manufacture. It has a porosity of 10-90%, a maximum pore diameter of 0.00015-500 mu m, and BET surface are before activation of 500-700 m2/g.

DESCRIPTION OF DRAWING(S) - The figure is a labeled flow chart of the method for forming the carbon material/carbon composite.

Dwg.1/21

FS CPI EPI
FA AB; GI; DCN
MC CPI: A05-H06; A10-E05B; A12-E07B; D04-A01F; E31-N03; J01-D01; J01-E02B; J06-B06; L03-J
EPI: V01-B01A; V01-B01D; X16-E01C; X16-E01E; X16-E02; X16-E06A; X16-E08A; X16-L02

L98 ANSWER 2 OF 11 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2003-681889 [65] WPIX
DNN N2003-544470 DNC C2003-186352
TI Porous hydrophilic membrane for fuel cell, comprises amorphous ionomer having acidic hydrophilic group deposited on porous inert support, and has ionic conductivity in electrochemical cell, and preset water permeability.
DC A14 A25 A85 L03 X16
IN ARCELLA, V; GHIELMI, A
PA (AUSY) AUSIMONT SPA
CYC 30
PI EP 1238999 A1 20020911 (200365)* EN 14 C08J005-22
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR
CA 2373396 A1 20020826 (200365) EN B01D071-36
CN 1371934 A 20021002 (200365) C08J005-18
JP 2002334707 A 20021122 (200365) 12 H01M008-02
US 2002144899 A1 20021010 (200365) C25B013-00
ADT EP 1238999 A1 EP 2002-3033 20020212; CA 2373396 A1 CA 2002-2373396 20020226; CN 1371934 A CN 2002-105353 20020226; JP 2002334707 A JP 2002-50044 20020226; US 2002144899 A1 US 2002-80555 20020225
PRAI IT 2001-MI383 20010226
IC ICM B01D071-36; C08J005-18; C08J005-22; C25B013-00; H01M008-02
ICS B01D053-22; B01D069-10; B01D071-32; B01D071-34; C08F214-18; C08J005-20; C08J009-42; C08L027-12; C25C007-04; H01B001-06; H01M008-10

ICI C08L027:18
AB EP 1238999 A UPAB: 20031009
NOVELTY - A porous hydrophilic membrane comprises an ionomer which is deposited on a porous inert support. The membrane has ionic conductivity in electrochemical cell and water permeability of more than 1 l/(h.m2.atm). The ionomer in amorphous form comprises acid form hydrophilic group.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for preparation of hydrophilic porous membrane which involves impregnating porous support in solution of ionomeric compound having fluorinated **organic** solvent at 15-40 deg. C to form membrane. The membrane is thermally treated at 120-160 deg. C to remove solvent, and to form transparent membrane. The membrane is treated with inorganic aqueous base alkali, and the functional groups are converted into hydrophilic groups. The obtained membrane is treated in aqueous **inorganic** strong **acid** to form (per)fluorinated ionomer in acid hydrophilic form. The obtained membrane is optionally treated with water at 50-100 deg. C to remove excess ionomer.
USE - Such as proton exchange membrane for electrochemical cells and fuel cells (claimed), and occluded membrane is used as semi-permeable membrane for reverse osmosis. The partially occluded porous membrane is used for forming electrodes and separators for **lithium batteries**.
ADVANTAGE - The hydrophilic membrane has high water permeability, high conductivity in electrolytic cells, and improved proton exchange capability. The membrane having ionomer of low equivalent weight, has superior application efficiency. The membrane when used in the catalytic reactions, shows high catalytic activity and when the membrane is used in the electrochemical applications, shows high ionic exchange capability. The membranes are used at room temperature, and high and low temperatures.
Dwg.0/0
FS CPI EPI
FA AB
MC CPI: A04-E10; A10-E01; A11-B05; A12-E06B; L03-B01A; L03-E01B5; L03-E04
EPI: X16-B01F1; X16-C; X16-F02

L98 ANSWER 3 OF 11 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2002-231328 [29] WPIX
DNN N2002-178031 DNC C2002-070452
TI Anode active material manufacture for non-aqueous electrolyte **battery**, involves immersing specific **lithium** complex into process liquid containing polar **organic** solvent and **inorganic acid** for specific time.
DC L03 X16
PA (TOYT) TOYOTA JIDOSHA KK
CYC 1
PI JP 2001332261 A 20011130 (200229)* 7 H01M004-58
ADT JP 2001332261 A JP 2000-150317 20000522
PRAI JP 2000-150317 20000522
IC ICM H01M004-58
ICS H01M010-40
AB JP2001332261 A UPAB: 20020508
NOVELTY - Lithium complex such as lithium nickelate of rock salt structure, is immersed into a process liquid containing a polar **organic** solvent and **inorganic acid**, for 12 hours or more.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for non-aqueous electrolyte battery.
USE - For non-aqueous electrolytic **battery** (claimed) such

as **lithium**-ion secondary **battery**.

ADVANTAGE - Non-aqueous electrolyte battery with excellent durability and with stabilized discharge characteristics, is obtained.

DESCRIPTION OF DRAWING(S) - The figure shows the explanatory and cross sectional views of change of crystal structure by immersion process.

Dwg.2/6

FS CPI EPI
FA AB; GI
MC CPI: L03-E01C2
EPI: X16-B01F; X16-E01C; X16-J02; X16-J08

L98 ANSWER 4 OF 11 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2001-608965 [70] WPIX
DNN N2001-454759 DNC C2001-181244
TI Cation analysis involves introducing sample containing cation into cation exchange resin column, and separating and analyzing cation using aqueous solution containing **inorganic acid** and **organic acid** as mobile phase.
DC E37 J04 L03 S03
PA (SEIM-N) SEIMI CHEM KK
CYC 1
PI JP 2001174446 A 20010629 (200170)* 6 G01N030-88
ADT JP 2001174446 A JP 1999-360205 19991220
PRAI JP 1999-360205 19991220
IC ICM G01N030-88
AB JP2001174446 A UPAB: 20011129
NOVELTY - The sample solution containing a cation is introduced into a cation exchange resin column of an ion chromatography apparatus. The cation in the sample is separated and analyzed using an aqueous solution which contains **inorganic acid** and an **organic acid** as a mobile phase.

USE - For analysis of cation in sample, for analysis of elementary composition ratio in positive electrode active material of **lithium** secondary **battery**.

ADVANTAGE - The quantity of alkali metal, alkaline earth metal and transition metal or measured simultaneously and accurately. The elementary composition ratio in positive electrode active material of **lithium** secondary **battery** is measured quickly and accurately. Analysis of semiconductor processing components, active materials and impurity element present in trace amount of fuel cell and nickel hydrogen battery, and lapping powder slurry for chemical mechanical polishing, are also enabled.

Dwg.0/1

FS CPI EPI
FA AB; DCN
MC CPI: E10-C02; E10-C04J1; E10-C04J2; E11-Q03; E31-B03D; E31-F04; E31-H05; E33; E34; E35; J04-B01C; L03-E01B
EPI: S03-E09C

L98 ANSWER 5 OF 11 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2001-550252 [61] WPIX
CR 2000-349945 [30]; 2002-598993 [64]
DNC C2001-163866
TI Production of alkylene carbonate by contacting carbon dioxide, alkylene oxide, and catalyst to obtain crude effluent, subjecting effluent to multiple distillations, and further contacting purified alkylene carbonate with carbon.
DC E17
IN MACHAC, J R; MARQUIS, E T; SANDERSON, J R; SAVAGE, R L; WOODRUM, S A

PA (HUNT-N) HUNTSMAN PETROCHEMICAL CORP
CYC 94
PI WO 2001066510 A2 20010913 (200161)* EN 26 C07C068-00
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
AU 2001045460 A 20010917 (200204) C07C068-00
US 6384240 B1 20020507 (200235) C07D317-36
US 6458969 B1 20021001 (200268) C07D317-36
US 2002147349 A1 20021010 (200269) C07D317-08
ADT WO 2001066510 A2 WO 2001-US7129 20010307; AU 2001045460 A AU 2001-45460 20010307; US 6384240 B1 CIP of US 1998-167361 19981007, US 2000-521502 20000309; US 6458969 B1 CIP of US 1998-167361 19981007, Div ex US 2000-521502 20000309, US 2002-71169 20020329; US 2002147349 A1 CIP of US 1998-167361 19981007, Div ex US 2000-521502 20000309, US 2002-71169 20020329
FDT AU 2001045460 A Based on WO 2001066510; US 6458969 B1 CIP of US 6156160, Div ex US 6384240; US 2002147349 A1 CIP of US 6156160, Div ex US 6384240
PRAI US 2000-521502 20000309; US 1998-167361 19981007; US 2002-71169 20020329
IC ICM C07C068-00; C07D317-08; C07D317-36
ICS B01D003-00; B01D003-34
AB WO 200166510 A UPAB: 20021026
NOVELTY - An alkylene carbonate is produced by contacting carbon dioxide, an alkylene oxide, and a carbonation catalyst in a reactor to produce a crude reactor effluent. The effluent is subjected to multiple distillations, where the unused fractions are recycled to the reactor. The purified alkylene carbonate is further contacted with carbon to reduce its ultraviolet absorbance.

DETAILED DESCRIPTION - Production of alkylene carbonate involves contacting carbon dioxide, alkylene oxide, and carbonation catalyst in a reactor to produce a crude reactor effluent. The effluent is subjected to low temperature evaporation to form an evaporator overhead containing alkylene carbonate and an evaporator bottom stream containing the catalyst. The evaporator bottom stream is recycled to the reactor, and the light components present in the evaporator overhead are removed to form a second evaporator overhead. The light components are recycled to the reactor. The second evaporator overhead is distilled to form a first distillation overhead stream and a first distillation bottom stream containing alkylene carbonate. The first distillation overhead stream is recycled to the reactor. The first distillation bottom stream is again distilled to form a second distillation overhead stream and a second distillation bottom stream, and the second distillation bottom stream is recycled. The second distillation overhead stream is further distilled to form a third distillation overhead stream and a third distillation bottom stream, and recycling the third distillation overhead stream. The third distillation bottom stream is further distilled to form a fourth distillation overhead stream containing purified alkylene carbonate and a fourth distillation bottom stream, and recycling the fourth distillation bottom stream. The purified alkylene carbonate is contacted with carbon to reduce its ultraviolet (UV) absorbance.

An INDEPENDENT CLAIM is also included for a process useful for reducing the UV absorbance of an alkylene carbonate.

USE - The method is for producing alkylene carbonate used as solvents for electrolyte salts in **lithium batteries**. The alkylene carbonate can also be used in electrochromic or photochromic

applications.
ADVANTAGE - The inventive method generates less waste and is cost-effective. It produces alkylene carbonate of high purity (at least 99.99%) and very low ultraviolet absorbance (i.e., 0.350 at 220 nm). The alkylene carbonate has low water content (e.g., less than 20 ppm) and low glycol by-product (e.g., less than 20 ppm).
Dwg.0/2
FS CPI
FA AB; DCN
MC CPI: E07-A04; N05-D

L98 ANSWER 6 OF 11 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2001-162029 [17] WPIX
DNN N2001-118195 DNC C2001-048717
TI Recovery of cobalt from aqueous cobalt solution involves dissolving cobalt in **organic** acid, removing insoluble components and reducing cobalt by adding amphoteric metal.
DC L03 M25 X16
PA (ASAK-N) ASAKA RIKEN KOGYO KK
CYC 1
PI JP 2000328153 A 20001128 (200117)* 6 C22B023-00
ADT JP 2000328153 A JP 1999-133543 19990514
PRAI JP 1999-133543 19990514
IC ICM C22B023-00
ICS C22B003-04; C22B003-44; H01M010-54
ICA C22B007-00
AB JP2000328153 A UPAB: 20010328
NOVELTY - Cobalt is dissolved in an **inorganic acid** and insoluble components are removed from the solution by purification. To the reduced cobalt solution one or more amphoteric metal is added, cobalt is precipitated and recovered when the normal electrode potential of the reduction solution is in the range of -2.4 to -0.6 V. The amphoteric metal is then removed by alkali treatment.
USE - For recovering cobalt from an aqueous cobalt solution obtained from **lithium** ion **battery**.
ADVANTAGE - Cobalt is recovered efficiently.
Dwg.1/2
FS CPI EPI
FA AB; GI
MC CPI: L03-E01; L03-E01C; L03-E03; M25-E01
EPI: X16-X

L98 ANSWER 7 OF 11 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2001-141944 [15] WPIX
DNN N2001-103728 DNC C2001-042420
TI Formation of solid polymer electrolyte for use in electrochemical devices involves reacting compound containing at least two sulfonic acid groups or its derivative with compound containing at least two amino groups.
DC A85 L03 X12 X16
PA (HITB) HITACHI CHEM CO LTD
CYC 1
PI JP 2000331713 A 20001130 (200115)* 12 H01M010-40
ADT JP 2000331713 A JP 1999-141396 19990521
PRAI JP 1999-141396 19990521
IC ICM H01M010-40
ICS C08G075-30; C08K003-00; C08L081-10; H01B001-06; H01B013-00
AB JP2000331713 A UPAB: 20010317
NOVELTY - A compound containing at least two sulfonic acid, or its halide or other derivative is reacted with a compound containing at least two

amino groups.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following: (i) Solid polymer electrolyte; and (ii) electrochemical device using polymer electrolyte.
USE - For formation of solid polymer electrolyte used for electrochemical device such as **lithium** secondary **battery**
.
ADVANTAGE - The electrolyte has high ionic conductivity, less interfacial resistance, excellent toughness and mechanical properties. Electrochemical device with excellent thinning, laminate formation properties, easier packagability and reduced weight is obtained using the solid electrolyte.
Dwg.0/0
FS CPI EPI
FA AB
MC CPI: A99-A; L03-E01C
EPI: X12-D01C; X12-D07; X16-B01F

L98 ANSWER 8 OF 11 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1999-464225 [39] WPIX
DNN N1999-347888 DNC C1999-136550
TI Electrolyte for **lithium** secondary **battery** - contains carbonate that acts as organic solvent and polymerisation inhibitor.
DC L03 X16
PA (FUIT) FUJITSU LTD
CYC 1
PI JP 11195427 A 19990721 (199939)* 6 H01M010-40
ADT JP 11195427 A JP 1998-1070 19980106
PRAI JP 1998-1070 19980106
IC ICM H01M010-40
AB JP 11195427 A UPAB: 19991026
NOVELTY - The electrolyte (5) contains lithium salt with **inorganic** or **organic acid** residues excluding As. Carbonate as an organic solvent and polymerisation inhibitor is also included.
USE - For **lithium** secondary **battery**.
ADVANTAGE - Raise of temperature is suppressed and charging/discharging characteristics are improved. The flow of electricity is reduced as internal resistance is increased.
Dwg.0/2
FS CPI EPI
FA AB
MC CPI: L03-E01C
EPI: X16-B01F1; X16-J

L98 ANSWER 9 OF 11 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1998-600320 [51] WPIX
DNN N1998-467710 DNC C1998-179899
TI Electrolyte for **lithium** sec. **battery** - uses a combination of an **organic** acid lithium salt, and at least one **inorganic acid** lithium salt.
DC E12 L03 X16
PA (MITU) MITSUBISHI CHEM CORP
CYC 1
PI JP 10270078 A 19981009 (199851)* 7 'H01M010-40
ADT JP 10270078 A JP 1997-75534 19970327
PRAI JP 1997-75534 19970327
IC ICM H01M010-40
AB JP 10270078 A UPAB: 19981223
An electrolyte uses a combination of an **organic** acid lithium

salt of formula LiN(SO2CnF2n+1)(SO2CmF2m+1) (1), and at least one **inorganic acid** lithium salt selected from the group consisting of LiX (X = PF6, AsF6, SbF6, or BF4) with mol ratios ranging from 95:5 to 60:40 as a solute, and contains an ester carbonate cpd. as an **organic** solvent. n and m = 1-4.

ADVANTAGE - The solute has an oxidation electric potential for aluminium higher than an electric potential for a positive electrode in normal charge. The result exerts good charge with evolving less dissolution of the aluminium current collector of the positive electrode to the electrolyte. The electrolyte has superior conductivity, provides the aluminium of the current collector of the positive electrode in charge with no corrosion (no dissolution) to yield high lithium charge-discharge efficiency, resulting in good charge-discharge characteristics. High safety and high reliability are observed.

Dwg.0/1

FS CPI EPI
FA AB; DCN
MC CPI: E05-A; E11-N; L03-E01C
EPI: X16-B01F1; X16-J

L98 ANSWER 10 OF 11 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1998-527099 [45] WPIX
DNN N1998-412132 DNC C1998-158365
TI Producing anode active material for secondary battery - by adding **organic** amine to solution of lithium and other metal element, adding hydrogen peroxide to form hydroxide, mixing obtained powder with solution of composite fatty acid metal salt, etc..
DC E19 L03 X16
PA (MURA) MURATA MFG CO LTD
CYC 1
PI JP 10233213 A 19980902 (199845)* 5 H01M004-58
JP 3301335 B2 20020715 (200253) 5 H01M004-58
ADT JP 10233213 A JP 1997-32028 19970217; JP 3301335 B2 JP 1997-32028 19970217
FDT JP 3301335 B2 Previous Publ. JP 10233213
PRAI JP 1997-32028 19970217
IC ICM H01M004-58
ICS C04B035-495; H01M004-02; H01M004-04; H01M010-40
AB JP 10233213 A UPAB: 19981111
An anode active material consists of LiMxO2x. M = at least element selected from Ni, Mn, Co, Cr, Fe, and V; x = 1 or 2. The production comprises: (a) adding an **organic** amine to a mixed solution containing Li+ and M (n = number of ion valencies of M element) to precipitate M(OH)n (n = number of ion valencies of M element); (b) adding hydrogen peroxide to the developed M(OH)n solution to form M(OH)n to MOOH and to deposit Li2O2 on the surfaces of the MOOH particles; drying the Li2O2-deposited MOOH particles; (c) mixing the MOOH powder with the solution of a composite fatty acid metal salt cpd. of Li and M; (d) drying the resulting mixture to cover the surface of the powder by the composite fatty acid metal salt cpd.; (e) heat treating the covered powder.

ADVANTAGE - The method synthesizes the homogeneous active material at low temps. The particle dia. is fine submicron. The battery has enhanced filling density of the active material to increase electrical capacity. An inexpensive **inorganic acid** salt is used as a starting material. No crushing process is needed, producing the active material at lower cost.

Dwg.0/0

FS CPI EPI
FA AB; DCN
MC CPI: E10-B04; E10-C04L; L03-E01B8

EPI: X16-B01F; X16-E01; X16-E01C; X16-E01G

L98 ANSWER 11 OF 11 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1993-296675 [38] WPIX
DNN N1993-228676 DNC C1993-131456
TI **Lithium**-intercalating carbon electrode for storage **battery** - obtd. by heating **organic** or **inorganic** **acid** with carbon precursor to gives large capacity and freedom from dendrites.
DC A85 E17 E36 L03 X16
IN BITO, Y; HASEGAWA, M; ITO, S; MURAI, H; TOYOGUCHI, Y
PA (MATU) MATSUSHITA ELEC IND CO LTD; (MATU) MATSUSHITA ELECTRIC IND CO LTD
CYC 5

PI	EP 561372	A1	19930922 (199338)*	EN	15	H01M004-58
	R: DE FR GB					
	JP 06044959	A	19940218 (199412)		11	H01M004-02
	US 5580538	A	19961203 (199703)		9	D01F009-12
	EP 561372	B1	19970604 (199727)	EN	15	H01M004-58
	R: DE FR GB					
	DE 69311170	E	19970710 (199733)			H01M004-58
	JP 3401646	B2	20030428 (200330)		11	H01M004-58

ADT EP 561372 A1 EP 1993-104339 19930317; JP 06044959 A JP 1993-46528 19930308; US 5580538 A Cont of US 1993-31627 19930315, US 1994-306248 19940914; EP 561372 B1 EP 1993-104339 19930317; DE 69311170 E DE 1993-611170 19930317, EP 1993-104339 19930317; JP 3401646 B2 JP 1993-46528 19930308
FDT DE 69311170 E Based on EP 561372; JP 3401646 B2 Previous Publ. JP 06044959
PRAI JP 1992-61661 19920318; JP 1992-61665 19920318
REP 1.Jnl.Ref; EP 418514; EP 529095; JP 03245458; JP 3245458
IC ICM D01F009-12; H01M004-02; H01M004-58
ICS C01B031-02; H01M004-04; H01M010-40
AB EP 561372 A UPAB: 19931123
A Li-intercalating negative electrode (1) for a storage battery including a reversible anode (4), a non-aqueous Li salt-containing electrolyte, and the cathode which is made of a carbon material having an improved surface area large enough to store Li ions to provide the largest possible charge and discharge capacitances.

Also claimed is production of the cathode by mixing an acid with the C-containing material, heating to form the C material, and forming the electrode.

Pref. the carbon material can form an intercalation cpd. with Li and is graphite. The acid is inorganic, sulphuric, nitric, or hydrochloric, or boric, or carboxylic such as acetic or formic. The C-containing material is **organic**- pitch, coal tar, coke, resin, cellulose, PAn, or rayon, or inorganic- graphite, carbon fibre, or graphite whisker. The **organic** material is heated at 400-3000 deg.C or where it is converted to inorganic C, and the inorganic material is heated at 100-1500 deg.C.

USE/ADVANTAGE - The electrode is useful for high energy density batteries, is reliable, increases charge-discharge capacity, and avoids shorts caused by dendrite formation.

10

Dwg.1/4

FS CPI EPI
FA AB; GI; DCN
MC CPI: A12-E06A; E31-N02; E31-N03; L03-E01B5
EPI: X16-E01A; X16-E08A